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PATENT
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TOWNSEND and TOWNSEND and CREW LLP

By: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Bradley J. Swearingen, et al.

Application No.: 09/663,151

Filed: September 15, 2000

For: METHOD AND SYSTEM FOR
EXECUTING TRADES IN A USER PREF
SECURITY

Confirmation No. 2668

Examiner: Narayanswamy Subramanian

Technology Center/Art Unit: 3695

**APPELLANTS' REPLY BRIEF
UNDER 37 C.F.R. § 41.41**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Sir:

This Reply Brief is submitted in response to the Examiner's Answer mailed on
October 28, 2008.

1. **Status Of Claims**

Claims 67-114 are pending, stand rejected, and are under appeal. Claims 1-66 are canceled.

2. **Grounds Of Rejection Presented For Review**

1. Are claims 67-114 directed to patentable subject matter under 35 U.S.C. §101?

3. **Response To Examiner's Argument**

In the Examiner's Answer, the prior §101 rejection was maintained and additional comments were presented in response to the Appellants' Brief filed on February 28, 2008 and Appellant's Supplemental Brief filed on August 14, 2008. Appellants stand on the arguments presented in the Appellants' previous briefs and present the following comments directed to the Examiner's Answer.

Claims 64-98: Computer-readable medium claims (i.e., "Beauregard Claims") are patentable subject matter under 35 USC §101.

At page 4 of the Examiner's Answer, the Examiner relies on the "useful, concrete, and tangible result" test from *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 1373-74 to reject claims 64-98 as directed to non-statutory subject matter under § 101 for failing to produce a concrete result. The Examiner concludes that the present claims fail this test, "[s]ince there is no guarantee that the user selection will be the identical for *all iterations* of the method..." [emphasis added] The Examiner repeats this same basic argument at pages 10-11.

In response, Appellants wish to point out that there are a number of problems with the Examiner's arguments. First, the Examiner is applying an incorrect test in making the determination that claims 64-98 are directed toward non-statutory subject matter. In the

recently decided case *In re Bilski* __ F.3d __ (Fed. Cir. 2008) (*en banc*), the Federal Circuit stated:

while looking for "a useful, concrete and tangible result" may in many instances provide useful indications of whether a claim is drawn to a fundamental principle or a practical application of such a principle, *that inquiry is insufficient to determine whether a claim is patent-eligible under § 101*. And it was certainly never intended to supplant the Supreme Court's test. Therefore, *we also conclude that the "useful, concrete and tangible result" inquiry is inadequate* and reaffirm that the machine-or-transformation test outlined by the Supreme Court is the proper test to apply. (2007-1130 at p. 20) [emphasis added]

The court further added:

As a result, those portions of our opinions in *State Street* and *AT&T* relying solely on a "useful, concrete and tangible result" analysis *should no longer be relied on*. (FN 19) [emphasis added]

The Federal Circuit could not have been more clear in stating that the "useful, concrete, and tangible result" analysis is an insufficient analysis, standing on its own, to determine whether a claim is directed to patent-eligible subject matter under § 101. Because the Examiner has only relied on the "useful, concrete, and tangible result" analysis to determine that claims 64-98 are not directed to patent-eligible subject matter, the present rejections to computer readable claims 64-98 should be overturned for this reason alone.

Second, to the extent that the "concrete result" test can provide a useful indication of the patentability of computer readable claims 67-82, the Examiner has misapplied the test. The Examiner's reading of the "useful, concrete, and tangible result" test is so narrow that if the Examiner's reading was the correct reading, it would be nearly impossible to draft meaningful claims in a wide variety of disciplines. For example, a method of treatment for a disease wherein a dosage of medicine administered to a patient varies according to certain patient characteristics could not be claimed under the Examiner's standard, because this method of treatment would give no guarantee that each iteration of the method would administer the same dosage of medicine for each and every patient. Similarly, a method for correcting errors in data transmitted over a network could not be claimed under the Examiner's standard, because each iteration of the method would behave slightly

differently because of the random nature of the errors in the transmission. In essence, the Examiner is asserting that a claim becomes “irreproducible,” and thus directed to non-statutory subject matter, if a claim recites a well-defined variable that is used to describe how the invention operates. This is obviously not the appropriate standard under §101.

A proper reading of the “useful, concrete, and tangible result” test as applied to the present claims is that a given set of inputs (e.g., securities information, user preferences, and user selections) should produce a predictable set of outputs (e.g., an order for a user selected security according to various order parameters). This is all that is required under §101, and the present claims easily satisfy this requirement. The Examiner’s assertion that the present claims are directed to non-statutory subject matter under §101 because there is no guarantee that a user’s selection will be identical for all iterations of the method is flatly incorrect.

At pages 5-6 of the Examiner’s Answer, the Examiner cites to *In re Warmerdam* 31 USPQ2d 1754 (1994) as supporting the assertion that claims 67-82 are directed “to a data structure, per se, or other functional descriptive material, including computer programs, per se, [that are] not patent eligible subject matter” under §101.

Appellants once again disagree with the Examiner’s reading of *In re Warmerdam*. The relevant claims at issue in *In re Warmerdam* were explicitly directed toward a method of creating a “data structure” and not a computer readable medium. For example, the primary independent claim at issue in *In re Warmerdam* read “[a] method for generating a data structure which represents the shape of [sic] physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of: first locating the medial axis of the object and then creating a hierarchy of bubbles on the medial axis.” [emphasis added] *In re Warmerdam*, 31 USPQ2d 1754, 1756 (1994). Clearly, a method claim directed to generating a data structure is very different from an apparatus claim directed to a computer-readable medium. Consequently, the holding of *In re Warmerdam* is inapplicable to the present claims.

The relevant case for deciding the patentability of claims directed to computer readable media, decided after *In re Warmerdam*, is *In re Beauregard* 35 USPQ2d 1383 (Fed.

Cir.) (1995). In *In re Beauregard*, the Federal Circuit stated that “computer programs embodied in a tangible medium...are patentable subject matter under 35 U.S.C. Section 101...” *In re Beauregard* at 1384. The Board of Patent Appeals and Interferences, in a post-*In re Bilski* decision, has recently reaffirmed *In re Beauregard* by stating “[i]t has been the practice for a number of years that a “Beauregard Claim” of this nature be considered statutory at the USPTO as a product claim.”¹ *Ex parte Bo Li*, Appeal 2008-1213 (BPAI Nov. 6, 2008).

Claims 67-82 claim a computer readable medium comprising various code segments. Claims 67-82 very closely track the framework sanctioned by *In re Beauregard*²

¹ The claim at issue in *Ex parte Bo Li* read as follows:

42. A computer program product, comprising a computer usable medium having a computer readable program code embodied therein, said computer readable program code adapted to be executed to implement a method for generating a report, said method comprising:

providing a system, wherein the system comprises distinct software modules, and wherein the distinct software modules comprise a logic processing module, a configuration file processing module, a data organization module, and a data display organization module;

parsing a configuration file into definition data that specifies: a data organization of the report, a display organization of the report, and at least one data source comprising report data to be used for generating the report, and wherein said parsing is performed by the configuration file processing module in response to being called by the logic processing module;

extracting the report data from the at least one data source, wherein said extracting is performed by the data organization module in response to being called by the logic processing module;

receiving, by the logic processing module, the definition data from the configuration file processing module and the extracted report data from the data organization module; and

organizing, by the data display organization module in response to being called by the logic processing module, a data display organization of the report, wherein said organizing comprises utilizing the definition data received by the logic processing module and the extracted report data received by the logic processing module.

² For example, one of the claims ultimately allowed by the USPTO in the application at issue in *In re Beauregard* reads:

5. A computer program product comprising:

a computer usable medium having computer readable program code means embodied in said medium for causing a display in a graphic display device of a filled polygon having a boundary of lines definable by a plurality of selectable pels, said computer program product including:

and reaffirmed by *Ex parte Bo Li*. For example, claim 67 in the present application recites “*A computer readable medium having a sequence of instructions which, when executed by a processing entity, effectuates a trade in a user selected preferred security, the computer readable medium comprising: a code segment for identifying...a code segment for generating a graph...a code segment for receiving a user selection...a code segment for associating order parameters...a code segment for sending an order...*” [emphasis added]

It is easy to demonstrate that computer-readable medium claims, in a nearly identical form to claims 67-82, are routinely allowed by the USPTO. For example, U.S. Patent No. 7,247,025 (issued July 24, 2007) recites as its first independent claim “[a] *computer-readable medium having encoded thereon a software program for testing a working memory, the software program comprising: (a) a code segment for sequentially presenting...a first plurality of images...(b) a code segment for simultaneously presenting...a second plurality of images...(c) a code segment for prompting the subject to select an analogous image...*” (Claim 1) [emphasis added]

U.S. Patent No. 7,447,499 (issued November 4, 2008) recites as its first independent claim “[a] *computer readable medium that stores a computer program...the computer readable medium comprising: a storing code segment...executable to store data...an identifying code segment, recorded on the computer readable medium, executable to identify at*

computer readable program code means for determining if the algebraic sign of the difference in the y value for each of two adjacent vertices of the polygon changes less than 4 times;

computer readable program code means for causing a computer to effect, with respect to one boundary line at a time, a sequential traverse of said plurality of selectable pels of each said respective boundary line;

computer readable program code means for causing the computer to store during said traverse a minimum and a maximum value of said selectable pels for each one of said plurality of scan lines for each one of said plurality of lines if the program code means for determining is true; and

computer readable program code means for causing the computer to draw a fill line, after said traverse, from a least value of said minimum value to a greatest value of said maximum value for each one of said plurality of scan lines. (U.S. Pat. No. 5,710,578)

least one wireless carrier...and *a transmitting code segment*, recorded on the computer readable medium, executable to transmit data...” (Claim 1) [emphasis added]

U.S. Patent No. 6,724,401 (issued April 20, 2004) recites as its first independent claim “[a] *computer readable medium* having embodied thereon *a computer program* for processing by a computer, the computer program comprising: *a first code segment* to maintain a body of source code...*a second code segment* to generate one or more clean source code files ...*a third code segment* to build the computer-based application by compiling the source code files...*a fourth code segment* to generate one or more documentation source files...and *a fifth code segment* to produce the one or more documentation source files in a format for display by a web browser.” (Claim 1) [emphasis added]

U.S. Patent No. 7,046,732 (May 16, 2006) recites as its first independent claim “[a] *computer-readable medium* having *software* for editing a decomposed original video sequence...said software comprising: *code segments* for editing at least one of said original camera-motion layers...” (Claim 1) [emphasis added]

Many more examples of claims directed to computer-readable medium comprising code segments can be found using basic searches at the USPTO’s own website for “computer readable medium comprising” and “code segment.”³ Additionally, there are surely many other slight variants of this basic claim format that can also be found, e.g., by replacing “code segment” with “computer-executable code”, “code for”, “computer code”, etc.

If the Examiner’s standard for computer-readable medium claims was correct, then each and every one of these computer-readable medium claims listed above should not have been allowed because such claims are *per se* not patent eligible subject matter. Clearly the Examiner’s position that a claim directed to a computer-readable medium reciting code

³See Patent Database Search Results: ACLM/”computer readable medium comprising” AND ACLM/”code segment” in US Patent Collection, <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetacgi/nph-adv.htm&r=0&p=1&f=S&l=50&Query=ACLM%2F%22computer+readable+medium+comprising%22+AND+ACLM%2F%22code+segment%22&d=PTXT> (last visited Dec. 12, 2008) (showing the USPTO patent search site returning 99 different patents with the words “computer readable medium comprising” and “code segment” in the claims).

segments is *per se* not patent eligible subject matter is plainly incorrect according to recent case law and the USPTO's own positions on the matter. Consequently, the Examiner's rejection of claims 67-82 should be reversed.

Claims 83-98: "Means For" clauses that can be embodied by code segments residing on a computer readable medium and executed by a processor are proper subject matter under 35 USC §101.

At page 6 of the Examiner's Answer, the Examiner states that the "means for" clauses used in system claims 83-98 are inoperable and therefore lack utility because the "means for" clauses are simply functional descriptive material directed to software that is *per se* not statutory.

In response, Appellants disagree. Just as with the computer-readable medium claims discussed above, the fact that the "means for" clauses recited in claims 83-98 can be broadly interpreted to refer to software program elements does not render the claims to be ineligible matter under 35 U.S.C. §101 for lacking utility. The use of "means for" clauses is a well-established practice with the USPTO for the precise purpose of allowing functional descriptions to stand in the place of reciting particular structures. The present claims are not directed to ineligible matter under 35 U.S.C. §101 for lacking utility simply because an embodiment of the functionality recited by the "means for" clauses in the present claims can be a computer readable medium comprising various code segments that are executed by a processor. The Examiner is essentially applying the same incorrect standard used to reject claims 67-82 to reject claims 83-98.

At page 11 of the Examiner's Answer, the Examiner states that "[c]learly the means for generating a graph is modified by a lot of structure, material, or acts for achieving the function of generating" and that therefore certain elements in claims 83-98 do not qualify as "means for" elements under the sixth paragraph of 35 U.S.C. §112.

In response, Appellants disagree that the "means for" clauses are modified by sufficient structure, material or acts for achieving the specified function. The step of "generating a graph" cited by the Examiner does not specify how the graph is to be generated.

A person skilled in the art implementing claims 83-98 is free to generate a graph using any appropriate means. Claims 83 does recite particular *characteristics* of the graph to be generated, but the claim does not recite *structure, materials, or acts* to be used in generating the graph. Consequently, the claim elements cited by the Examiner do properly evoke 35 U.S.C. §112, paragraph six as “means for” elements.

Claims 99-114: Method claims that are tied to a computer and transform data stored in a particular article are directed toward statutory subject matter under 35 USC §101.

At page 12 of the Examiner’s Answer, the Examiner states it is improper to read into the claims 99-114 “code segments on a computer-readable medium.”

In response, Appellants disagree that any attempt is made to “read into” the claims these apparatuses or systems. The Appellants are simply pointing out that the claim 99-114 cannot be read to operate in any way other than using such devices.

In *In re Bilski*, the Federal Circuit stated that a claimed process is patent-eligible under § 101 if the claimed process is tied to a particular machine or apparatus, or if the claimed process transforms a particular article into a different state or thing. *In re Bilski* 2007-1130 at p.10.

In *In re Comiskey*, the Federal Circuit, applying a similar standard as the one sanctioned by the *In re Bilski* court, concluded that a claim that recited “a registration module” and “an arbitration database” sufficiently combined the use of machines with a mental process to claim patentable subject matter. *In re Comiskey*, 499 F.3d 1365, 1379-1380 (Fed. Cir.) (2007). The sanctioned claims in *Comiskey* would pass the test recited by *Bilski* because the claims in *Comiskey* were sufficiently “tied to a particular machine or apparatus.”

Similar to the claims in *Comiskey*, claims 99-114 are also sufficiently “tied to a particular machine or apparatus” to claim a patent-eligible process. Claims 99-114 recite various terms that only make sense in the context of a person interacting with a computer system. For example, the claims recite terms such as “user,” “preloading the order parameters,” “storing information relating to the order in a database,” “receiving a continuously updated stream of security data,” and “displaying a three dimensional coordinate

system.” The impact of these terms on the patentability of the present claims is identical to the impact of the “registration module” and “arbitration database” recited in the approved claims in *Comiskey*.

Additionally, the present claims would also pass the “transformation” test offered by the *Bilski* court. For example, claim 105 recites “storing information relating to the order in a database.” This step transforms a particular article, a database, into a different state by storing data in the database that would not otherwise exist in the database. The database is transformed from a first state, in which the database lacks the order data, to a second state, in which the database includes the order data.

Appellants request reversal of the rejection of record.

Respectfully submitted,

Date: 12/22/08


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